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**ABSTRACT OF THE DISCLOSURE**

A system and method for transporting a call having call signaling and voiceband user communications through an asynchronous transfer mode system identifies when compression, encryption, or another processing option has been applied to the  
5 voiceband user communications. A first signaling processor processes the call signaling to identify a selected first connection and a processing option, such as a compression method, to be applied to the voiceband user communications. The first signaling processor transports a control message to a first interworking unit identifying the selected connection and the selected compression method. The first interworking unit compresses  
10 the voiceband user communications with the selected compression method, sets a convergence sublayer indicator bit as an indicator in an asynchronous transfer mode cell, fills the cell with the compressed voiceband user communications, and transports the cell over the selected connection. A second interworking unit receives the asynchronous transfer mode cell, and interworks the cell according to a decompression method for the  
15 voiceband user communications if the convergence sublayer indicator bit is set.

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